

SATURDAY MARCH 31st, 1906

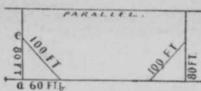


LAYING OFF AN ORCHARD. Important to Select Lands Either

North and South or East and West.

It is very important in the northern states to select lands which lie either This offers no particular difficulties on squares. It is not essential that and south or east and west lines. So later, split down the crotch. far as we can observe, the angle which tree's lines make with cardinal points have no value in the growth of the plant or character of fruit, although it is thought by some that south rows offer better access to sunlight, but as to this factor we cannot say. To lay off irregular land, in case none of the boundaries forms a natural or convenient base line, it is necessary to establish a base line across the plot on such site as best suited the wishes of the planter. This may be on exact north and south, or east and west lines; or it may have an angle so as to bring the row lines into conformity to the best contour lines, or so as to give the longest straight lines in any desired directions. Having established the base line, the next operation is to measure off, at right angles from two points, from the base line preferably at as great a distance, say the space of eight or ten rows, more or less, as may be convenient, and establish thereby a parallel to the base

In order that this sectional line shall be an accurate parallel, it is necessary to establish the perpendicular by starting from a stake, a in diagram, on the bse line and lay off on this line exactly 60 feet and establish second stake b, on same line Then from the point first taken draw a line 80 feet from the base line as nearly perpendic ular to it as possible, and test the same by drawing a line 100 feet from the second stake on the base line. The



PLAN FOR LAYING OUT ORCHARD. point c, where these lines meet at 80 feet from the base, will be an exact perpendicular from the point first Project this line to the required distance for establishing the parallel of the base line. Establish a diameter as the value one inch in second perpendicular in like manner. and project it to a distance equal to the first perpendicular; connect these points and a parallel is established. It is always best to establish one of these perpendiculars from the exact but two inches in diameter should be these perpendiculars from the exact the limit. In stock one inch and point on the base line where a tree is larger use two scions, and if both tion of a tree in the second or parallel line. In order to do this, it is proper to lay off and stake the tree in ual, the older and larger the trees ual, the older and larger the trees lishing the parallel, but this is not at in grafting that the bark of scion and tablish a tree position as the stake from which perpendicular is first taken. Diagram gives base line and

method of obtaining parallel.

After establishing one tree point on the base line, lay off and set stakes at each tree position on this line, usually beginning and ending 20 feet from boundary. Then on the parallel beginning at the tree point already established, lay off from it and set stakes at each tree position on this line. The two lines of stakes give two series of points on the parallel lines through which it is only necessary to project lines at right angles, and to ADVICE ON PLANTING TREES extend them to the boundaries of the plot to establish all the rows. Then Simple Rules Which Should Be Ob on these cross-lines it is necessary to set stakes at the proper distances to establish all the tree positions. It is quite customary to use a long line of cord or wire with the tree distances accurately marked on it for staking tree positions, says the Rural New Yorker. This is stretched carefully through the points on the parallel lines, and the stakes driven at the points marked on the setting line. On irregular plots the trees run out on the boundary as may happen without regard to number of rows.

HORTICULTURAL NOTES.

A nurseryman gives this advice: "Don't plant out trees unless you intend to care for them, for they never will amount to anything, and you will have all your work for nothing." Buy spraying outfits early.

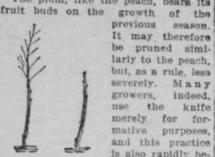
Americana plums ought to be west of the great lakes and north of a line drawn through central Illionis, in this way. east and west. These plums are very suitable to this great region, more so than many other varieties. There are probably 100 varieties of Americans plums of good quality and of commercial value.

Trees are like children; in the be dinning they give us a great deal of trouble and worry, but in the end we are proud of them. Take care of your erchard and your

A bolt put ln now may save nine shels of fruit later. Split trees and dangerous crotches need attention. Bolts are cheap. Use 'em!-Farm and

HOW TO PRUNE PLUM TREE Prof. H. N. Starnes Tells Just How

the Work Should Be Done When Tree Is Young. The plum, like the peach, bears its



but, as a rule, less severely. Many is also rapidly be-

oming common with the peach. Immediately on planting, if in the spring, the whip should be cut back to within 20 inches of the ground. If planted in December it is better to leave the top intact until just before the buds begin to swell, or until they have fairly started. As soon as the buds have clearly developed all but four or five near the top should be rubbed off, and north or south or east and west lines. these should be so situated as to produce an evenly branched, well-balin carrying out the design of planting anced head by the end of the season. the orchard lines should lie on north duce a fork. This will, sooner or They should never be so left as to pro-

Before the second spring the four or five main branches should be short-

ened in about two-thirds and superfluous canes removed, as well as any limbs that cross so as to rub one another. The skeleton will then stand forlorn in appearance, but ready for a vigorous developthe next ment



year. If the tree has a tendency toward a spreading or dropping habit, as with Clifford or Wilder, says the Orange Judd Farmer, the cut should be made so as to throw the terminal bud on the inside, to correct this tendency and cause a more upright or perpendicular growth. On the other hand, with varieties like Brill, or Bartlett and Wickson of the Japan group, whose habit is too compactly upright, the terminal bud should be left on the outside, and possibly removed to render the head more open. After the tree comes into bearing little pruning is advisable beyond the removal of surplus wood for the purpose of admitting light and air, and occasionally cutting back abnormally elongated terminals to prevent breaking down during fruiting. Yet on account of the rather uncertain habit of the plum in fruit setting, due to imperfect selfpollination, it is not safe to reduce, in advance, the fruiting surface with the knife. It is better to rely on thinning the crop, if too large, after it has

TOP-WORKING OLD TREES.

Rules to Be Observed by the Orchardist in Securing the Best Results.

will be obtained where scions are set perfect than if larger ones are used. Where old trees are grafted with the object of changing entire top it will grow cut one out the following season stock are in perfect line, to allow free flow of sap, says the Rural New Yorker. Cover wound airtight with grafting wax. Apple trees from piece root grafts are partly on their own roots, as many varieties root freely on the scion as well as the sending root. Budded trees are wholly on seedling root and are not as hardy. Nearly all varieties of apple can be maintained 25 years or longer in a healthy condition by proper care and pruning. Neglect is the prime cause of the failure of many trese.

served If the Tree Is to Be Given Fair Chance.

How to plant a tree is something that every farmer should know. As yet we see many farms in this western country that would be very much better off with more trees.

In digging up a tree keep the spade edge toward the trunk or ball of the tree. This way does not injure the roots so badly. Move as much dirt with the tree as possible. Set a little deeper than it was before, see that the roots are spread out even in the hole. Tramp the dirt firmly and put a liberal amount of straw around it for mulching. If the season is dry it is necessary to put a pail or two of water around the root every evening. If the tree is tall it is advisable, says the Prairie Farmer, to drive or set something of the post kind to tie studied by all fruit growers living it or the wind will spoil your tree. Many trees are killed the first season

> As for cutting back the top, it de pends on how much you have cut off the roots. As the roots feed the top, a man must here use his own judgment. If a tree dies, don't be discouraged, but try it again.

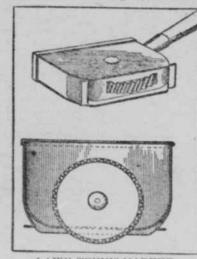
Tommy-Pa, what is the Golden Pa-Give your friends the same



LAWN TENNIS MARKEP

Makes Easy the Marking Out of the Court in Narrow But Heavy White Lines.

No branch of sport has increased in popularity more than lawn tennis, which is at last receiving the recognition that it deserves. To play the game properly it is necessary that the ground should be level and well rolled.

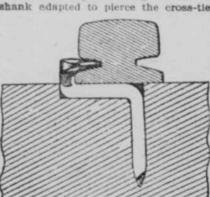


LAWN TENNIS MARKER

clear and distinct. Tapes, which are often used, are a nuisance, and are not to be compared to lines marked with lime directly upon the gravel or grass. One of the latest machines deviced for marking out tennis courts is shown in the illustration, says the Philadelphia Record. It consists of a casing made of tin or other light metal and has a hinged lid, through which it can be filled with powdered lime, with which the lines are made. The sides and ends of the casing extend slightly below the bottom, forming These flunges travel near the ground, their object being to prevent the wind from blowing away or scattering the lime as it is laid out by the marker. A wheel is journaled within the casing and extends through an opening in the bottom of the casing. The rim of the wheel is corrugated obliquely and fits closely in the open-In descending the corrugations on the wheel carry small charges of powder out through the opening. The corrugations being oblique, any lumps or obstructions in the powder will be deflected to one side. After the casing has been filled with powdered lime, the handle is grasped and the medicine carried to the point of Therefore the marker is pushed along over a string or toward a given object, if the user's eye be true, and the result will be that a narrow, but heavy white line will be formed on es, contact with the ground causes drawing out the powder.

RAILROAD SPIKES.

New Type of Nail Which Pierces the Tie Beneath the Steel Rail.



THE NEW RAILROAD SPIKE.

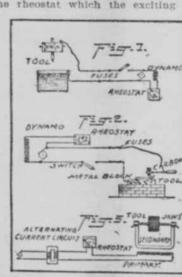
beneath the rall, has just been invent- by the use of a rheostat, and thus we ed by Rowland Anderson, of Chihua- can obtain a perfect adjustment of the hua, Mexico. The head is formed to temperature during the process.-L' grip the rail above its flange and hold | Electricien.

New Auto Wind Screen.

ELECTRIC TEMPERING.

Simple Methods of Applying the Correct Degree of Temperature by Means of Current.

The following simple methods of tempering and annealing tools have been described by J. M. Gladbill. By using the electric current for the heat, we can easily carry out the operations, and the temperatures can be regulated to the right point. One of these apparatus is represented in Fig. 1. It consists of a sheet iron tank of suitable size containing a concentrated carbonate of potash solution. The tool to be tempered is mounted in an appropriate socket or holder which is connected with the positive pole and the lines marking the boundaries of the dynamo. The circuit is closed by the metallic tank. Switches and regulators are placed in the circuit. The tempering operation is carried out in the following manner: The circuit being closed, the tool is plunged slowly into the bath so as to dip the part which is to be tempered. This part heats up under the action of the current. When the right temperature is judged to have been reached, the current is broken suddenly and the tempering takes place in the liquid of the bath. The electric are may also be used for the same purpose. Fig. 2 shows the arrangement which is used in this case. The tool to be tempered is placed upon a support of fireproof material which is also a poor conducmaterial which is also a poor conductor of heat, and the arc is started at first at a low tension between the porfirst at a low tension between the portion of the tool which we desire to Remedies; Roots, Herbs, Gums, temper and a carbon electrode placed Barks, Vines and Flowers. Thirty near it. The tension is increased by working a rheostat until we obtain the necessary heat, but overheating or melting of the tool is avoided. As a source of current we use a direct current dynamo which will give a tension varying from 50 to 150 volts. The dyname is operated by an electric motor working at 220 volts. In this way it is possible to produce arcs varying Kidneys. Regulates the bowels. from 10 to 1,000 amperes by working the rheostat which the exciting cur-



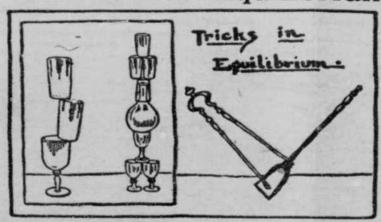
TEMPERING AND ANNEALING PROC-ESSES.

rent of the dynamos carries. The electhe ground. As the marker prog- tric method can also be used with success for annealing. This applies to the wheel to rotate, the corrugations tools of special form such as gears, dies, and in general to all tools where we need to have a hard temper on the outer part while the inside has a great tenacity. Generally the annealing is carried out by introducing a heated rod into the hollow tool. But this process is defective both on account of the difficulty of keeping up the tem-A railroad spike having a stem or perature for a long enough time and In top-grafting trees the best success shank edapted to pierce the cross-tie also from the cracks which may occur from a too rapid heating up. With the electric process which we flustrate below, such accidents are not to feared, since the rod is introduced when cold and it is heated up gradually. We are thus able to keep the temperature at the right point during the whole time which the annealing requires. The apparatus is represented in Fig. 3. We employ a transformer which lowers the tension of the alternating current to two volts. The secondary coll of the transformer is formed of a copper bar of large section which is connected to each end of the form carrying the tool. We regulate the strength of the current and consequently the temperature of the holder

Odors Are Gas.

If odors were solid particles they The celluloid wind screens of auto- would tend to form nuclei of cloudy mobiles give great risk of fire. Very condensation in supersaturated air. fine copper gauze is said to have Dr. John Aitken has tested musk and proven a satisfactory substitute, be- 23 other odorous substances without ing easily seen through and none-in- finding such nuclei, and he concludes flammable, while it does not crack that odors are gaseous and that smell has gas as its fundamental basis.

Two Tricks in Equilibrium



performing the tricks shown in illus- you become expert. tration with goblets, provided you can perform successfully if you adjust that you do not use your mother's illustration

Juvenile Shrewdness. Kitty called up her father by tele-

"Hello, papa!" "What is it, dear?" he asked. "I wish you'd bring me some evening."

"All right, Kitty; but why do you epell it out?" "I don't want anybody else to know eights you smoke yourself.—N. Y. Sun what I'm saying."—Chicago Tribune. "Thanks; we haven't left much."—

You can entertain your friends by best goblets, but use cups of tin until

practice a little first. It is suggested the shovel and tongs exactly as the

Obeyed Instructions. A lady going from home for the day

locked everything up well, and for the grocer's benefit wrote on a card: "All out. Don't leave anything."

This she stuck on the front door. On c-a-n-d-y when you come home this her return home she found her house ransacked and all her choicest possessions gone. To the card on the door

STILL HAD IT IN HIS MOUTH.



Gent (with the flowery button-hole, who has just met with a stroke of luck)-I really believe I must have been born with a silver spoon in my

Ulster Gent-And what's more, old chap, it looks as if it is still inside!

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